

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Chambard et al.

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SERIAL NO.: 09/846,483

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Examiner: E. McAvoy

FILED: May 1, 2001

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Art Unit: 1764

TITLED: LUBRICATING OIL COMPOSITION

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Atty. Docket No. 2000M005

Assistant Commissioner for Patents  
Washington, DC 20231

**DECLARATION**

Sir:

*Laurent Chambard*  
I, Laurent Chambard, hereby declare and say as follows:

- 2-2-2006*
1. I am a 1989 graduate of ENSMA of Poitiers, France and am a Chartered Mechanical Engineer. From 1990 to 1995, I was a design engineer for the French affiliate of Warstila. From 1995 through 1999 I was a lubricant formulator for the French affiliate of Shell Lubricants. From 1999 until February 2005, I was a marine lubricant formulator for Infineum UK Ltd., and from March 2005 to the present, I have been a passenger car and heavy duty diesel engine lubricant formulator for Infineum USA L.P., both Infineum UK Ltd. And Infineum USA L.P. being affiliates of Infineum International Ltd., the assignee of the above-identified patent application.
  
  2. I am a co-inventor of the subject matter of the above-identified application, and offer this Declaration in support thereof. Specifically, I am providing this Declaration to explain why the invention presently claimed would not be suggested to one of ordinary skill in the art by the disclosures of U.S. Patent Nos. 4,283,294 to Clarke (hereinafter referred to as the "Clarke patent") and 6,114,288 to Fujitsu et al. (hereinafter the "Fujitsu et al. patent").
  
  3. As one familiar with the formulation of lubricants for each of marine diesel engines (both cross-head and trunk-piston engines) and vehicular engines (both passenger car motor oils (PCMO) and crankcase lubricants for heavy duty diesel (HDD) engines), I wish to point out that while all such lubricants share certain characteristics, each is distinct, and a conventional composition for, for example, a marine diesel cylinder lubricant, is quite different than a conventional lubricant used in automotive engines.

4. The Clarke patent is directed to marine diesel cylinder lubricants (MDCL) which, in two-stroke engines, are introduced into the cylinder in addition to a diesel fuel and much of it burned together with the fuel in operation of the engine, the unburnt part of it being directed to a waste tank and not to the engine (the oil is only used once as a ‘once through’ lubricant and is not recirculated). The crankcases of such two stroke engines are lubricated separately with “system” oil. As would be known to those skilled in the art, system oils conventionally have a dispersant, and have a relatively low TBN (since the acid neutralization function is provided by the extremely high TBN cylinder lubricant). On the other hand, one skilled in the art would recognize that, as much of a cylinder lubricant for a two stroke engine is burned with the fuel and the rest is evacuated from the engine, there is no need for a dispersant that maintains sludge and asphaltenes in suspension within the oil since the oil is not continuously recirculated through the engine. One skilled in the art would further understand that cylinder lubricants have a function that differs from that of crankcase lubricants and would not be led to add a cylinder lubricant to an engine crankcase absent a specific teaching that a cylinder lubricant was also suitable for use as a crankcase lubricant. The Clarke et al. patent contains no such suggestion and, therefore, the Clarke patent does not suggest the presently claimed method for lubricating the crankcases of four stroke marine diesel engines.

5. Further, the Clarke patent does not differentiate between carboxylate detergents and other detergents, such as phenates and sulfonates and, thus, further fails to suggest the basic concept invention, which is that at high TBN levels, carboxylate detergents cause asphaltenes to be maintained in suspension within a crankcase lubricating oil in the absence of conventional dispersants. The exemplified lubricants of the Clarke et al. patent all use phenate detergents.

6. The Fujitsu et al. patent would be recognized as being related specifically to lubricating oil compositions for passenger cars, and not to lubricants for marine diesel engines, based on the various tests and standards described therein, as well as the levels of dispersants and detergents used in the exemplified materials. This argument was rebuffed on the premise that there is nothing in the Fujitsu et al. patent that restricts the use of the lubricants described therein. For example, the high temperature high shear (HTHS) viscosity limit on the lubricants of the Fujitsu et al. patent requires a multigrade oil. Passenger car motor oils are multigrade. Marine Trunk Piston Engine Oils (TPEOs) are not. The numerical HTHS limits of the Fujitsu et al. patent expressly limit the lubricants described therein to 5W20 grade lubricants. TPEO compositions, in addition to being single grade, are more viscous than 20 Grade (e.g., are 30 or 40 grade oils). The Fujitsu et al. patent includes no description of high-TBN lubricants and the exemplified lubricants all have TBNs typical of passenger car motor oils (e.g., the 7.8 TBN lubricant of Example 1 or the 7.22 TBN

lubricant of Example 2). TPEO compositions, on the other hand, are high TBN compositions (e.g., have a TBN of 25 or greater. In testing the lubricants disclosed, the Fujitsu et al. patent references an industry standard test for wear, JASO M328-95, which is a test for passenger car motor oils and not TPEO compositions. In addition to viscosity modifiers, the Fujitsu et al. patent also describes as suitable additives, pour point depressants and friction modifiers, which are also not conventionally used in TPEO compositions.

7. Regarding the use of language within the disclosure of the Fujitsu et al. patent, even if considered by one of ordinary skill in the art relied on to suggest that the dispersant is an optional component, one of ordinary skill in the art understands that patents are drafted to describe an invention in the broadest terms possible. In the case of the Fujitsu et al. patent, one of ordinary skill in the art would expect that the claimed invention; the use of a salicylate detergent and the noted combination of ZDDP components could be expected to provide improved antiwear protection on 5W-20 multigrade lubricants regardless of the amount, or nature of the other components. One of ordinary skill would be aware that all conventional lubricants for passenger cars (and marine diesel crankcase lubricants) invariably contain other components including dispersants (and other additives, such as antioxidants). Such persons would not be led to formulate a lubricant without dispersant simply because a patent specification uses the term "may contain", absent a concrete teaching of a reason why these conventional additives are not necessary. The Fujitsu et al. patent does not explicitly state that any useable lubricants free from dispersant could be formed and, all exemplified materials of the Fujitsu clearly contain dispersant (see description of "other additives"). Specifically, the exemplified materials of the Fujitsu et al. patent all contain 8.3 wt. % of "additives", which are defined as ash-free dispersant, pour point depressant and antifoaming agent. Passenger car motor oils contain only small amounts of pour point depressant, such as 0.2 to 0.6 wt. % (TPEO does not conventionally contain pour point depressant) and antifoamant, such as 0.001 or 0.002 wt. %. This means that the exemplified materials of the Fujitsu et al. patent contain from 7.7 to 8.1 wt. % of dispersant.

8. In view of the long standard practice of using dispersants, the fact that the exemplified materials of the patent all contain dispersant, and the lack of any express teaching that dispersants are not required, it is clear that one skilled in the art would not be led by the disclosure of the Fujitsu et al. patent to formulate a dispersant-free lubricating oil composition, particularly a dispersant-free lubricating oil composition for use as a TPEO. Further, the invention is directed to the discovery that the use of high TBN lubricants containing only carboxylate detergents allows for the suspension of asphaltenes in the absence of dispersant. Such an invention is clearly not suggested by the Fujitsu et al. patent which fails to describe (1) an environment in which asphaltenes contaminate the lubricant, or (2) a high TBN (at least 25) lubricant.

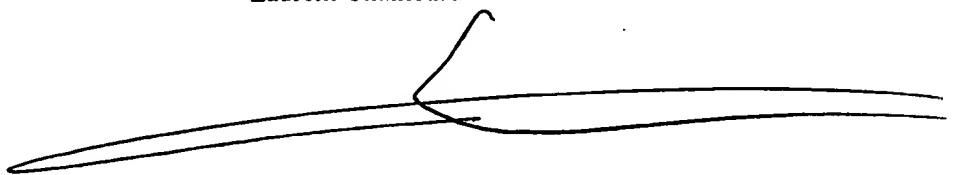
It is declared that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the U.S.Code.

Respectfully submitted

Laurent Chambard

December 13, 2005

Date

A handwritten signature in black ink, appearing to read "Laurent Chambard". The signature is written in a cursive style with a long horizontal stroke and a vertical flourish at the end.